

Title (en)  
Actuator

Title (de)  
Betätiger

Title (fr)  
Actionneur

Publication  
**EP 1006646 A3 20030305 (EN)**

Application  
**EP 99124123 A 19991202**

Priority  
JP 34452898 A 19981203

Abstract (en)  
[origin: EP1006646A2] An inexpensive, small, high-efficiency actuator having a single-phase claw pole structure permits easy assembly or winding and enables a rotor to act in a fixed direction by detent torque even in a deenergization mode. The actuator includes a stator yoke composed of a pair of substantially circular toroidal planar yokes formed of a soft magnetic material, polar teeth which axially protrude from inner peripheral edges of the respective planar yokes and which are disposed so that they face each other, extending in a circumferential direction, and a stator yoke that has a cylindrical ring provided on outer peripheral edges of the planar yokes; an armature being constituted by installing a coil formed by winding a magnet wire in a coil receiving section shaped like an annular recess formed by the planar yokes, the polar teeth, and the cylindrical ring of the stator yoke; and a stator assembly which has flanges with bearings provided on both end surfaces of the armature and in which a rotor provided with a magnet for a magnetic field composed of a permanent magnet being installed such that it faces the polar teeth of the stator with minute gaps provided therebetween; wherein the number of the polar tooth equals the number N of rotor magnetic poles (N is 2 or 4). <IMAGE>

IPC 1-7  
**H02K 21/14**; **H02K 1/27**

IPC 8 full level  
**H02K 1/14** (2006.01); **H02K 1/27** (2006.01); **H02K 19/04** (2006.01); **H02K 21/14** (2006.01); **H02K 21/20** (2006.01); **H02K 33/00** (2006.01)

CPC (source: EP US)  
**H02K 21/145** (2013.01 - EP US); **H02K 2201/12** (2013.01 - EP US)

Citation (search report)  
• [X] US 5126605 A 19920630 - PALMERO ALBERT [US]  
• [X] EP 0341867 A1 19891115 - OKI ELECTRIC IND CO LTD [JP]  
• [X] US 4942325 A 19900717 - FUKAYA KATSUYOSHI [JP]  
• [A] DE 3742502 A1 19890629 - ERWIN SANDER ELEKTROAPPARATEBA [DE]

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**EP 1006646 A2 20000607**; **EP 1006646 A3 20030305**; **EP 1006646 B1 20090218**; DE 69940419 D1 20090402; JP 2000175421 A 20000623; JP 3554756 B2 20040818; US 6756871 B1 20040629

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